

DETAILED ACTION

1. This office action is responsive to the communication on March 13, 2008; claims 1, 4-28, 33-34 are pending; claims 2-3, 29-32 have been canceled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4-9, 22-24, 26, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Okada et al (US Patent No 6,210,983), Oya et al (US 2002/0,048,732), Oya et al (US 2003/0,235,791), Oyamada et al (US 2003/0,087,204), Winslow et al (US Patent No. 5,891,615) and Purol et al (US Patent No. 5,236,816).

Okada et al discloses a photothermographic material containing silver halide, a non-photosensitive organic silver salt, a reducing agent and compounds having an X as an adsorption promoting silver halide and D is an electron donative group of atoms and L₁ is a covalent or a linking group. See formula (1) in column 3; the exemplified compound in columns 11-22, compounds 1-60. The compound contains X group within the scope of A and the W group within the scope of (W) claimed in the present claimed invention. D group is an electron donative group of formula (D-1), (D-2) and (D-3) in column 5, lines 10-25. The exemplified compound in column 13-14, compounds 7, 8 contain the group -NH(C=O)NHOH which is the hydroxyureas group claimed in claimed invention. Okada et al disclose the use of silver halide including silver iodide and silver halide having silver iodide content from 0.1 to 40 mole % in

column 36, lines 3-17; bisphenols reducing agents in column 39, lines 21-32; binder in column 41, lines 13-30; the amount of photosensitive silver halide of an amount of 0.01 to 0.5 mole per mole of an organic silver salt in column 37, lines 6-10; and the amount of the compound of formula (I) is at least 10^{-4} mol/mol of silver in column 25, lines 33-45.

Winslow et al (US Patent No. 5,891,615) discloses a 3-pyrazolidones (phenidones) in column 16, lines 27 as reducing agent for organic silver salt and Purols et al (US patent No. 5,236,816) discloses the "penidones" as super-additive developing agent for silver ions including the "1-phenyl-3-pyrazolidone). See column 15.

Okada et al fail to disclose the development accelerator of formula (1) to (3), and the 3-pyrazolidone in claim 1, but development accelerator as claimed have been known in Oya et al (US 2002/0,048,732), Oya et al (US 2003/0,235,791) and Oyamada et al (US 2003/0,087,204), and the 1-phenyl-3-pyrazolidone has been known as an equivalent reducing agent for silver ion such as taught in Winslow et al and Purols. See '732 in the abstract formula (1) and formula (3) on page 2; '204 on page 3, formula (1) to (3) and '791 page 2, formula (1), (2), (6), (7). It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the development accelerator known in Oya et al (US 2002/0,048,732), Oya et al (US 2003/0,235,791) and Oyamada et al (US 2003/0,087,204) in combination with the use of a known equivalent of equivalent reducing agent for silver ion taught in Winslow et al or Purols in the material of Okada et al with an expectation of increasing the speed of development and an formation of silver image, and thereby provide a material as claimed.

4. Claims 10-14, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Okada et al (US Patent No. 6,210,983) in combination with Tsuzuki et al (US

Art Unit: 1795

Patent No. 5,677,121), EP 1096310A2 (EP'310), Winslow et al (US Patent No. 5,891,615) and Purol et al (US Patent No. 5,236,816).

Okada et al discloses a photothermographic material containing silver halide, a non-photosensitive organic silver salt, a reducing agent and a compounds having an X as an adsorption promoting silver halide and D is an electron donative group of atoms and L_1 is a covalent or a linking group. See formula (1) in column 3; the exemplified compound in columns 11-22, compounds 1-60. The compound contains X group within the scope of A and the W group within the scope of (W) claimed in the present claimed invention. D group is an electron donative group of formula (D-1), (D-2) and (D-3) in column 5, lines 10-25. The exemplified compound in column 13-14, compounds 7, 8 contains the group $-NH(C=O)NHOH$ which is the hydroxyureas group claimed in claimed invention. Okada et al disclose the use of silver halide including silver iodide and silver halide having silver iodide content from 0.1 to 40 mole % in column 36, lines 3-17; bisphenols reducing agents in column 39, lines 21-32; binder including copoly(styrene-butadiene) in column 41, lines 36-50; and silver salt of an aliphatic carboxylic acid including silver behenate in column 37, lines 35-40.

Tsuzuki discloses the use of silver salt of an organic acid wherein the acid behenic is from 35 to less than 90 mol % to provide a photothermographic material with excellent storability, excellent graininess and high definite image (abstract, and column 1, lines 5-8. EP'310 on pages 38-39 discloses the binder for a photothermographic material including styrene-butadiene having glass transition temperature of less than 40 °C. Winslow et al (US Patent No. 5,891,615) discloses a 3-pyrazolidones (phenidones) in column 16, lines 27 as reducing agent for organic silver salt and

Purols et al (US patent No. 5,236,816) discloses the "penidones" as super-additive developing agent for silver ions including the "1-phenyl-3-pyrazolidone). See column 15.

It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use a known binder taught in EP'310, the silver salt of an organic acid taught in Tsuzuki and an equivalent reducing agent in Winslow et al or Purols in the material taught Okada et al with an expectation of achieving a material excellent storability, excellent graininess and high definite image.

5. Claims 15-21 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Okada et al (US Patent No. 6,210,983) and Fukui et al (US 2002/0102502A1), Winslow et al (US Patent No. 5,891,615) and Purol et al (US Patent No. 5,236,816).

Okada et al discloses a photothermographic material containing silver halide, a non-photosensitive organic silver salt, a reducing agent and compound having an X as an adsorption promoting silver halide and D is an electron donative group of atoms and L₁ is a covalent or a linking group. See formula (1) in column 3; the exemplified compound in columns 11-22, compounds 1-60. The compound contains X group within the scope of A and the W group within the scope of (W) claimed in the present claimed invention. D group is an electron donative group of formula (D-1), (D-2) and (D-3) in column 5, lines 10-25. The exemplified compound in column 13-14, compounds 7, 8 contain the group -NH(C=O)NHOH which is the hydroxyureas group claimed in claimed invention. Okada et al disclose the use of silver halide including silver iodide and silver halide having silver iodide content from 0.1 to 40 mole % in column 36, lines 3-17; bisphenols reducing agents in column 39, lines 21-32; and binder in column 41, lines 13-30.

Okada et al may not disclose the polyhalogenate compound of formula (H) 15 and the 1-phenyl-3-pyrazolidone in claim 15, but the polyhalogenate compound have been conventionally used as antifoggant for photothermographic material and taught in Fukui et al on page 18, [0188], and the 1-phenyl-3-pyrazolidone has been known as an equivalent reducing agent for silver ion such as taught in Winslow et al and Purols. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the antifoggant known in Fukui et al in the material of Okada et al to improve the fogging property, and the use of the known 3-pyrazolidone in association with the formula (I) taught in Okada et al with an expectation of producing silver image, and thereby provide a material as claimed.

Response to Arguments

6. Applicant's arguments March 10, 2008 have been fully considered but they are not persuasive of rejection set forth in the rejection above and the response to the argument on October 9, 2007. It is the Examiner's position that the compound of the formula (I) would have been found prima facie obvious over the combination of the prior art of record. Okada et al may not disclose the 3-pyrazolidone group, but this 3-pyrazolidone group have been known in the art such as being presented in the above rejection having property equivalent to electron donative group of atom taught in Okada et al. The worker of ordinary skill in the art would have use a group taught in Winslow et al or Purols et al equivalent to that taught in Okada et al with an expectation of achieving a similar results.

The applicants rely on the Declaration under 37 CFR 1.132 on March 10, 2008 to obviate the rejection under 35 USC 103(a) set forth above. However, the rejection fails to obviate the prima facie case of obviousness set forth above. The Declaration is not commensurate with the scope

of the claimed invention. First, the inventive samples C, D contains the compound of formula (71) and the development accelerator 1-68 and 6-41 respectively. The compound of formula (71) contains a phenyl group at 1-position and methyl group at 4-position. The scope of 3-pyrazolidone group encompasses the scope beyond the methyl group at the 4-position or the phenyl group associated to the compound of formula (71). Second, it is improper to conclude that the results associated to samples E, F are inferior to those associated to the samples C, D since the moieties associated to the reducing groups are different. Thus, it is unclear whether the different in results such as raw stock storability derive from the reducing agent per se or from the compound as a whole. Third, the Declaration is not commensurate with the scope of development accelerator. The Declaration shows the use of the compound of formula 71, development accelerator 6-41 and 1-68. The applicants are suggested to compare the scope of the compound of formula 1-68 and 6-61 to the scope of the compound of formula (I), and acceleration of formula (1) to formula (3), especially the scope of substituents associated with the compounds. "The data is not reasonably commensurate in scope with the claims, which, as drafted, are broad in scope and cover mixtures of numerous untested compounds. Lindner, 457 F. 2d at 508, 173 USPQ at 358." Fourth, the Declaration is not consistent with the specification disclosure. The specification disclosure fail to support the new finding that the 3-pyrazolidone group provide a photothermographic material with an improve results over that taught in Okada et al. Accordingly, it is believed that the invention as claimed would have been found prima facie obvious over the combination of the applied prior art of record.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 1795

Tch
2008-06-04

/Thorl Chea/
Primary Examiner,
Art Unit 1795